## RIVERS AND FLOODS

By RICHMOND T. ZOCH

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The official in charge of the Weather Bureau office at Houston, Tex., comments as follows on the flood in the Sabine River in March:

Moderately heavy rains were general over the upper drainage basin of the Sabine River from February 8 to 11, inclusive, and again on February 18. The run-off brought the Sabine River at Logansport from a stage of 7.7 feet on February 8 to a crest of 16.3 on February 22. Heavy rains fell over the entire drainage basin of the Sabine River on February 28 and continued on March 1 and 2. This downpour, falling on soil already very wet, produced rapid run-off. The river rose rapidly to flood stage on March 3 and reached a crest of 28.4 on March 8.

Damage was estimated by the river observer at \$410,000. The greater portion of this was created.

Damage was estimated by the river observer at \$410,000. The greater portion of this was crop loss, and for that reason problematical. However, the estimate was made with deliberation after the flood had receded, and it is the best information available to us.

There were numerous floods in the United States in April but, except for the ones in the Connecticut River, the upper Mississippi Valley, and in Oklahoma, none were of importance.

During the last days of March there was a heavy snow-fall over the northern and central part of Wisconsin and southeastern Minnesota. Partial melting of this snow caused rises in all streams. On April 2 and 3 heavy rains fell in most of the same territory melting the remainder of the snow. The rainfall ranged from 2 to 4 inches and as the ground was frozen the run-off was exceptionally rapid

Twelve people lost their lives in the flood waters and many were compelled to leave their homes, while others narrowly escaped drowning when trapped on flooded highways or weakened bridges. The total damage exceeded \$1,000,000.

In this flood the damage was caused almost entirely by small streams, in fact, flood stages were reached at only two of the Weather Bureau's gages in this region.

Torrential rains in western Oklahoma on April 4 caused a disastrous flood in the Washita River. This flood came on suddenly in the night and 22 persons lost their lives. The damage was somewhat more than \$500,000. No flood service is maintained on the Washita River.

The flood in the Connecticut River will be commented on in a later issue of the Monthly Weather Review.

Table of flood stages during April 1934
[All dates in April unless otherwise specified]

River and station	Flood stage	Above flood stages—dates		Crest	
		From-	То—	Stage	Date
ST. LAWRENCE DRAINAGE  Red Cedar: Williamston, Mich	Feet 6 8	4 4	4 6	Feet 6. 5 9. 8	4 6
Connecticut:  White River Junction, Vt  Holyoke, Mass  Hartford, Conn	18 9 16	\begin{cases} 13 & 17 \\ 26 & 13 \\ 3 & 13 \\ 27 & 27 \end{cases}	14 22 27 15 7 24 28	20. 5 19. 3 18. 8 10. 3 18. 9 23. 1 16. 4	13 21 26–27 14 5 14 28
Roanoke: Weldon, N.C Williamston, N.C	31 10	10 11	13 27	39. 3 11. 5	11 17

Table of flood stages during April 1934—Continued
[All dates in April unless otherwise specified]

[All dates in April unle	ss other	rwise specii	led]		
River and station	Flood stage	Above flood stages—dates		Crest	
		From-	То	Stage	Date
ATLANTIC SLOPE DRAINAGE—continued					
Fishing Creek: Enfield, N.C	Feet 14	12	(1)	Feet (1)	(1)
Tar: Rocky Mount, N.C	8	11	14	10.9	14
Tarboro, N.C	18 12	14 2	17 4	21. 0 13. 0	16 3
Neuse:	1-	13	23	15. 5	17-18
Neuse, N.C	13	10	14 20	19.0 14.5	12 20
Smithfield, N.C.	12	$\begin{cases} & 10 \\ 20 & \end{cases}$	16 21	18. 0 13. 8	15 21
Haw: Moneure, N.C	19 35	10 11	10 11	24. 5 35. 3	10 11
Peedee: Mars Bluff Bridge, S.C Santee:	17	14	15	17.4	15
Rimini	12	$\left\{\begin{array}{c} 11\\21\end{array}\right.$	13 23	12.8 14.0	12 22
Ferguson, S.C	12	1 25 1 20	29 4 22	13. 0 12. 3 15. 3	28 3 21
	14	20	22	10. 3	21
MISSISSIPPI SYSTEM	1				
Upper Mississipi Basin	,,			19.4	,
Chippewa: Durand, Wis	11 12	5	7 6	12. 4 13. 3	6
Ohio Basin				]	
Wabash: LaFayette, Ind Ohio: Dam No. 52	11 35	3	1 4	11. 4 35. 1	3-4
White Basin				}	
Black: Black Rock, Ark	14	7	7	14. 3	7
Georgetown, Ark	21 26	Mar. 28 Mar. 30	17 25	24. 5 29. 8	6-8
Arkansas Basin		1			
North Canadian: Canton, OklaPetit Jean: Danville, Ark	6 20	4 6	4 8	8. 5 21. 7	4 28
Red Basin					
Ouachita: Arkadelphia, Ark	12	6	6	12.9	6 10
Camden, ArkLittle: Whitecliffs, Ark	26 25	7 9	12 11	30.7 25.3	11
Sulphur: Ringo Crossing	20	{ 6	10	25.3	17
Naples, Tex		17 9 29	17 16	21. 8 26. 0 22. 7	10
• ,		29	May 1	22.1	30
Lower Mississippi Basin  Big Lake Outlet: Manila, Ark	10	Mar. 27	20	16,0	_
St. Francis: Fish, Mo	1	8	10	21, 9	9
St. Francis, Ark		Ĭ	5	18. 5	3-4
Atchafalaya Basin					Ì
Atchafalaya: Atchafalaya, La	22	7	23	22.7	15-17
WEST GULF OF MEXICO DRAINAGE					
Sabine: Logansport, LaTrinity:	25	10	16	26. 4	12
Trinidad, Tex	28 40 25	8 12 7	13 15 23	32. 9 40. 9 27. 3	11 13 11–13
PACIFIC SLOPE DEAINAGE					1
Columbia Basin		1			
Clearwater: Kamiah, Idaho	12	24	25	12. 1	24-25
Columbia: Marcus, Wash Vancouver, Wash	24 15	21 29	(3)	(3)	(2) (2)
V GHOULVEL, VV GSH	10	29	, ,,	"	<u>                                     </u>

Unknown, gage washed away.
 Flood continued into May.